

Appl. No.: 10/049,898
Amdt. Dated: October 30, 2003
Reply to Office Action of: August 20, 2003

The listing of claims below will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An optical waveguide, said optical waveguide comprising a fiber core, a fiber cladding and an outer coating, wherein the outer coating consists of a magnetizable material or a material having magnetic properties, and that by means of this outer coating a sufficiently large magnetic field is generated that this, as well as the Faraday effect in the fiber core and the length of the light waveguide in that manner, to cause a substantial polarization rotation

wherein the outer coating generates a sufficiently large magnetic field, creating a Faraday effect in the fiber core along a length of the fiber, that causes a substantial polarization effect, and,

wherein the outer coating is subdivided into two half-shells whose magnetic orientations are mutually opposed.

2. Cancelled

3. (original) The optical waveguide according to Claim 1, wherein the core is doped with YIG material.

4. (original) The optical waveguide according to Claim 1, wherein the optical waveguide is a single waveguide.

5. (currently amended) An optical isolator with a polarizer and a polarization rotor (13), having an associated light waveguide fiber having a fiber core showing a Faraday effect, a fiber cladding, and an outer fiber coating, wherein the outer fiber coating is such that it generates a permanent magnetic field in the fiber core, and that this magnetic field is sufficiently large that, along with the Faraday effect of the fiber core and the length of the light waveguide in such a manner to cause a substantial polarization rotation

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wherein the outer fiber coating generates a permanent magnetic field in the fiber core, the magnetic field being sufficiently large to create the Faraday effect in the fiber core along a length of the fiber, causing a substantial polarization effect, and
wherein the outer coating of the optical waveguide fiber is subdivided into two half-shells whose magnetic orientations are mutually opposed.

6. (original) The optical isolator according to Claim 5, wherein the polarizer comprises a polarization-preserving or polarization-rotating glass fiber, wherein the fibers of the polarizer and the polarization rotator are constructed in one piece as a continuous, spliced optical glass fibers.

7. Cancelled.

8. (original) The optical isolator according to Claim 5, wherein the core is doped with YIG material.

9. (original) The optical isolator according to Claim 5, wherein the optical waveguide fiber is a single waveguide.